A CIRCUIT AND METHOD FOR MODELING I/O

Abstract of the Disclosure

A circuit model and method for modeling circuit waveforms. The elements present in the basic model are capacitors and ideal current sources. The adaptability and accuracy of the model is made possible by explicitly tabulating all element values as simultaneous functions of all input and output voltages, and using a high-dimensional interpolation technique of arbitrary order. The topology chosen is the simplest one that still shows the necessary qualitative features and allows for simple generalization to multiple input/output pins. Accuracy is also provided by the implicit nature of the ordinary differential equation (ODE) used to solve for the output voltages.

Figures